

CLAIMS

WHAT IS CLAIMED:

1 1. A method for connecting a first and a second
 2 conductive surface, comprising the steps of:
 3 placing an anisotropic material between the first and
 4 second conductive surfaces to form an assembly;
 5 curing the anisotropic material;
 6 compressing the assembly to form a bond between the
 7 first and second conductive surfaces via the anisotropic
 8 material; and
 9 monitoring an electrical characteristic of the bond
 10 during at least one of the compressing and heating steps
 11 and generating a feedback signal corresponding to the
 12 electrical characteristic.

1 2. The method of claim 1, further comprising the
 2 step of adjusting pressure applied during the compressing
 3 step in response to the feedback signal.

1 3. The method of claim 2, wherein the adjusting step
2 includes the step of reducing the pressure applied during
3 the compressing step to a holding/clamping level when the
4 feedback signal indicates that the electrical
5 characteristic has reached a predetermined threshold.

1 4. The method of claim 3, wherein the electrical
2 characteristic monitored in the monitoring step is
3 resistance.

1 5. The method of claim 1, wherein the electrical
2 characteristic monitored in the monitoring step is
3 resistance.

1 6. The method of claim 1, wherein the curing step
2 includes heating the anisotropic material.

1 7. The method of claim 6, wherein the temperature is
2 kept constant during the curing step.

1 8. The method of claim 6, wherein the heating and
2 compressing steps are conducted simultaneously.

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1 9. A system for connecting a first and second
2 conductive surface, comprising:
3 a compressor that applies pressure to an assembly
4 having a first conductive surface and a second conductive
5 surface with an anisotropic material disposed between the
6 first and second conductive surfaces;
7 means for curing the anisotropic material;
8 a compressor that compresses the assembly to form a
9 bond between the first and second conductive surfaces via
10 the anisotropic material; and
11 a meter for measuring an electrical characteristic of
12 the bond and generating a feedback signal corresponding to
13 the electrical characteristic.

1 10. The system of claim 9, wherein the curing means
2 is a heater, and wherein the system further comprises a
3 thermode that monitors the temperature of the bond.

1 11. The system of claim 9, wherein the electrical
2 characteristic measured by the meter is resistance.

1 13. The system of claim 12, wherein the electrical
2 characteristic measured by the meter is resistance.

5 heating the anisotropic material to cure the
6 anisotropic material;

7 compressing the assembly to form a conductive bond
8 between the first and second conductive surfaces via the
9 anisotropic material;
10 monitoring a resistance of the conductive bond during
11 at least one of the compressing and heating steps and
12 generating a feedback signal corresponding to the
13 resistance; and

14 reducing the pressure applied during the compressing
15 step to a holding/clamping level when the feedback signal
16 indicates that the electrical characteristic has reached a
17 predetermined threshold.

1 15. The method of claim 14, wherein the temperature
2 is kept constant during the curing step.

1 16. The method of claim 14, wherein the heating and
2 compressing steps are conducted simultaneously.

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